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EXAMINER

JAKOVAC, RYAN J

ART UNIT

PAPER NUMBER

2445

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/784,146	Applicant(s) NOG ET AL.	
	Examiner RYAN J. JAKOVAC	Art Unit 2445	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 9-11, 13, 20, 25, 31, and 37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,9-11,13,20,25,31 and 37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 2, 4, 9-15, 17-20, 24-28, 31, 33 and 35-38 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 15, 20, and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is clear that the generation of the routing policy is based on message content. However, a recitation of what the generation is based on does not make clear the process of generation. The Examiner has not found disclosure in the Applicant's specification regarding generating a routing policy and it is unclear how this generation occurs. Therefore the scope of the claims are rendered indefinite.

Examiner's Note

4. According to fig. 6 and [0073-0076] of the Applicant's specification the node generates a message, not a routing policy. The "routing policies" of the Applicant's invention appear to be the data compression, encryption, or security parameters applied to routing messages (Nog, [0074]). The node "identifies" policies, and applies this policy to the message. There appears to

be no specific disclosure of a how a node would generate a routing policy since these policies are merely identified and applied to the routing messages exchanged between nodes.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 9-11, 13, 20, 25, 31, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2004/0010616 to McCanne.

Regarding claim 1, 10, 20, 25, McCanne teaches a method comprising: receiving a message at a routing node in an overlay network, the message comprising a header and a body, wherein the header comprises information for routing the message (McCanne, [0034], routing address information is carried in the message header. See also [0055].); passing the message to the application level at the routing node to process the message (McCanne, abstract, routing messages are processed at the application level. See also, [0009-0010], [0027], and [0033].); generating a routing policy for a sending node based at least in part on the body of the message, wherein the routing policy comprises instructions for redirecting messages based at least in part on the body of the message (McCanne, [0044-0046], routing occurs at the application level based

on exchanged messages. See also, [0203-0206], fig. 6.); returning the routing policy to the sending node (McCanne, [0009-0011], application level control is applied to transferred data. Nodes forward the routing messages after they routing policy is computed at the application level. See also, [0041-[0049].); identifying a final destination address to which to route the message (McCanne, [0055], [0166-0168], [0172], destination address is identified. See also, figs. 4-5.); and incorporating the routing policy into the body of the message and forwarding the message to the final destination node in the overlay network (McCanne, routers forward messages and compute routes including sources and destinations. See [0044-0046], [0166-0172].).

McCanne discloses generating a routing policy for a sending node, wherein the routing policy comprises instructions for redirecting messages as described above. The routing policy of McCanne is generated and comprises instructions based on the header and the overlay header as described in at least [0203-0206] and fig. 6.

It would have been obvious to one of ordinary skill in the art at the time of the invention combine generating routing policy based on the body of the message as claimed by the Applicant with the teachings of McCanne in view of McCanne's generation of routing policy based on headers or overlay headers since these differences amounts to mere variation and/or design choice.

Regarding claim 11, McCanne teaches the method of claim 1, further comprising receiving a plurality of routing policies at a sending node from a plurality of routing nodes in the

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overlay network (McCanne, [0132], tracking group membership at an overlay node. See also, fig. 5.).

Regarding claim 13, McCanne teaches the method of claim 1, further comprising applying a transport policy to the message after changing the address in the header of the message (McCanne, [0034], [0055], modification of header information including address.), wherein the transport policy defines which transportation protocol with which to send the message (McCanne, [0012], [0049-0050].).

Regarding claim 31, 37, McCanne teaches a computer program storage medium storing a computer program for executing on a computer system a computer process, the computer process method, the method comprising: identifying at least one routing policy for a message, the message comprising a header and a body, wherein the header comprises information for routing the message (McCanne, [0034], routing address information is carried in the message header. See also [0055].), wherein the routing policy comprises instructions for redirecting messages based at least in part on content of the body of the message (McCanne, [0044-0046], routing occurs at the application level based on exchanged messages. See also, fig. 6.); changing an address in the message to bypass at least one node in an overlay network based on the at least one routing policy (McCanne, fig. 5. See also [0176].); identifying a final destination address to which to route the message (McCanne, [0055], [0166-0168], [0172], destination address is identified. See also, figs. 4-5.); incorporating the routing policy into the body of the message and issuing the message in the overlay network directly to the final

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destination node (McCanne, [0055], [0166-0168], [0172], destination address is identified. See also, figs. 4-5.); and sending the at least one routing policy to a sending node in the overlay network (McCanne, routers forward messages and compute routes including sources and destinations. See [0044-0046], [0166-0172].).

Regarding claim 4, 26, 36, McCanne teaches the method of claim 1, wherein generating the routing policy is at an application level in the routing node (McCanne, [0051-0055], [0166-0168], [0172], destination address is identified. See also, figs. 4-5.). McCanne does not expressly disclose wherein a compression policy is applied to the message prior to returning the routing policy to the sending node. However, it would have been obvious to one of ordinary skill in the art at the time of invention to apply a compression policy with the method of McCanne in order to encode information using fewer bits, thereby reducing the consumption of resources. See *KSR v. Teleflex*, 550 U.S. ___, 127 S. Ct. 1727, 82 U.S.P.Q.2d 1385 (2007).

Regarding claim 9, 14, 28, 35, 38, McCanne teaches the method of claim 1, further comprising: applying a transport policy to the message only after applying each identified routing policy to the message, wherein the transport policy defines a transportation protocol over which to transport the message (McCanne, [0012], [0049-0050].), further comprising iteratively applying by the node a plurality of routing policies to the message, each of the plurality of routing policies modifying the address in the message (McCanne, [0044-0052], overlay multicasting.) McCanne does not expressly disclose applying an encryption policy before issuing the message directly to the final destination node in the overlay network.

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However, it would have been obvious to one of ordinary skill in the art at the time of invention to apply an encryption (i.e. security) policy with the method of McCanne in order to facilitate secure communications, which is a well known advantage in networking environments. See *KSR v. Teleflex*, 550 U.S. ___, 127 S. Ct. 1727, 82 U.S.P.Q.2d 1385 (2007).

Regarding claim 15, McCanne teaches a system comprising: a routing node receiving a message in an overlay network (McCanne, abstract), wherein the message comprises a body and a header, wherein the header comprises information for routing the message (McCanne, [0034], [0055], modification of header information including address.); routing table operatively associated with the routing node; and a message processor at the routing node (McCanne, abstract, information is routed according to routing tables. See also, [0009], [0121].), the message processor generating a routing policy for a sending node of the message and incorporating the routing policy into the body of the message, wherein the routing policy comprises instructions for redirecting messages based at least in part on content of the body of the message (McCanne, [0044-0046], routing occurs at the application level based on exchanged messages. See also, [0009-0010], [0027], and [0033].), the message processor generating the routing policy based on entries in the routing table (McCanne, abstract, information is routed according to routing tables. See also, [0009], [0121].). McCanne does not expressly disclose applying a security policy to the message, however, applying a security policy to the message offers well known advantages and would have been obvious to one of ordinary skill in the art at the time of invention as described above.

Regarding claim 17, McCanne teaches the system of claim 15, wherein the routing node includes a messaging level and an application level, the routing node generating the routing policy at the application level (McCanne, [0009-0011], application level control is applied to transferred data. Nodes forward the routing messages after they routing policy is computed at the application level. See also, [0041-[0049].).

Regarding claim 18, 19, McCanne teaches the system of claim 15, wherein the routing node includes a messaging level and an application level, the routing node returning the routing policy to the sending node at the messaging level (McCanne, [0009-0011], application level control is applied to transferred data. Nodes forward the routing messages after they routing policy is computed at the application level. See also, [0041-[0049].).

Regarding claim 24, 33, McCanne teaches the system of claim 20, 31, further comprising a transport policy identifying a transport protocol for the message based on the address in the header of the message (McCanne, fig. 5, header used in routing.) and iteratively applying a plurality of routing policies to the message, each of the plurality of routing policies changing the address in the message (McCanne, [0048-0053], [0115-0120].). McCanne does not expressly disclose wherein the messaging module is further configured to determine from the message if the sending node does not have routing policy instructions derived from the body of the message, and wherein the policy manager is configured to return the routing policy to the sending node if it is determined that the sending node does not have routing policy instructions derived from the body of the message, however the routing nodes of McCanne forward routing messages between

each other in order to route messages. It would have been obvious to one of ordinary skill in the art at the time of the invention to use basic error checking, such as making sure there was routing policy data contained in the messages forwarded from the routing nodes, and if not, indicating this in a return routing message.

Regarding claim 2, 12, 27, McCanne teaches the method of claim 1, further comprising: after passing the message to the application level at the routing node, modifying an address of the header of the message, to create a modified address (McCanne, [0034], [0055], modification of header information including address.); after generating the routing policy for the sending node based at least in part on the body of the message, determining from the message if the sending node does not have routing policy instructions derived from the body of the message after the message is passed to the application level of the routing node (McCanne, [0051-0055], [0166-0168], [0172], destination address is identified. See also, figs. 4-5.); and generating the routing policy based on the modified address (McCanne, [0051-0055].). McCanne does not expressly disclose returning the routing policy to the sending node if it is determined that the sending node does not have routing policy instructions derived from the body of the message, however the routing nodes of McCanne forward routing messages between each other in order to route messages. It would have been obvious to one of ordinary skill in the art at the time of the invention to use basic error checking, such as making sure there was routing policy data contained in the message, and if not, returning the routing policy to the sending node.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RYAN J. JAKOVAC whose telephone number is (571)270-5003. The examiner can normally be reached on Monday through Friday, 7:30 am to 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on 571-272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/RJ/

/VIVEK SRIVASTAVA/

Supervisory Patent Examiner, Art Unit 2445